

CLAIMS

1. A method for inhibiting cancerous growth of a cell, the method comprising contacting the cell with at least one antibody or an antigen-binding portion thereof, wherein the antibody or antigen-binding portion thereof binds to an epitope located
5 within residues 200 to 400 of EphB4 (SEQ ID NO: 1).
2. A method according to claim 1, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 201 to 245 of EphB4 (SEQ ID NO: 1).
3. A method according to claim 1 or 2, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 220 to 244 of EphB4 (SEQ ID
10 NO: 1).
4. A method according to any one of claims 1 to 3, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 220 to 230 of EphB4 (SEQ ID NO: 1).
5. A method for inhibiting cancerous growth of a cell, the method comprising
15 contacting the cell with at least one antibody or an antigen-binding portion thereof, wherein the antibody or antigen-binding portion thereof binds to an epitope located in a sequence at least 85% identical to residues selected from the group consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1), residues 220 to 244 of EphB4 (SEQ ID NO: 1) and residues 220 to 230 of EphB4 (SEQ ID
20 NO: 1).
6. A method according to claim 5, wherein the antibody or antigen-binding portion thereof binds to an epitope located in a sequence at least 90% identical to residues selected from the group consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1), residues 220 to 244 of EphB4 (SEQ ID NO:
25 1) and residues 220 to 230 of EphB4 (SEQ ID NO: 1).
7. A method according to any one of claims 1 to 6, wherein the sequence has a substitution of amino acid Asp (D) to Asn (N) at residue 226 of EphB4 (SEQ ID NO: 1).
8. A method for inducing cell death of a cancer cell, the method comprising contacting the cell with at least one antibody or an antigen-binding portion thereof,

wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 200 to 400 of EphB4 (SEQ ID NO: 1).

9. A method according to claim 8, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 201 to 245 of EphB4 (SEQ ID NO: 1).

5 10. A method according to claim 8 or 9, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 220 to 244 of EphB4 (SEQ ID NO: 1).

11. A method according to any one of claims 8 to 10, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 220 to 230 of EphB4 (SEQ ID NO: 1).

12. A method for inducing cell death of a cancer cell, the method comprising contacting the cell with at least one antibody or an antigen-binding portion thereof, wherein the antibody or antigen-binding portion thereof binds to an epitope located in a sequence at least 85% identical to residues selected from the group consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1), residues 220 to 244 of EphB4 (SEQ ID NO: 1) and residues 220 to 230 of EphB4 (SEQ ID NO: 1).

13. A method according to claim 12, wherein the antibody or antigen-binding portion thereof binds to an epitope located in a sequence at least 90% identical to residues selected from the group consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1), residues 220 to 244 of EphB4 (SEQ ID NO: 1) and residues 220 to 230 of EphB4 (SEQ ID NO: 1).

14. A method according to any one of claims 8 to 13, wherein the sequence has a substitution of amino acid Asp (D) to Asn (N) at residue 226 of EphB4 (SEQ ID NO: 1).

25 15. A method for treating or preventing cancer in a subject, the method comprising administering to the subject an effective amount of at least one antibody or an antigen-binding portion thereof, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 200 to 400 of EphB4 (SEQ ID NO: 1).

16. A method according to claim 15, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 201 to 245 of EphB4 (SEQ ID NO: 1).

17. A method according to claim 15 or 16, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 220 to 244 of EphB4 (SEQ ID NO: 1).

18. A method according to any one of claims 15 to 17, wherein the antibody or antigen-binding portion thereof binds to an epitope located within residues 220 to 230 of EphB4 (SEQ ID NO: 1).

19. A method for treating or preventing cancer in a subject, the method comprising administering to the subject an effective amount of at least one antibody or an antigen-binding portion thereof, wherein the antibody or antigen-binding portion thereof binds to an epitope located in a sequence at least 85% identical to residues selected from the group consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1), residues 220 to 244 of EphB4 (SEQ ID NO: 1) and residues 220 to 230 of EphB4 (SEQ ID NO: 1).

20. A method according to claim 19, wherein the antibody or antigen-binding portion thereof binds to an epitope located in a sequence at least 90% identical to residues selected from the group consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1), residues 220 to 244 of EphB4 (SEQ ID NO: 1) and residues 220 to 230 of EphB4 (SEQ ID NO: 1).

21. A method according to any one of claims 15 to 20, wherein the sequence has a substitution of amino acid Asp (D) to Asn (N) at residue 226 of EphB4 (SEQ ID NO: 1).

22. A method of identifying an agent which inhibits cancerous growth of a cell, the method comprising assessing the ability of the agent to bind to an EphB4 polypeptide within the region of residues 200 to 400 of EphB4 (SEQ ID NO:1).

23. A method according to claim 22, wherein the method comprising assessing the ability of the agent to bind to an EphB4 polypeptide within the region of residues 201 to 245 of EphB4 (SEQ ID NO:1).

24. A method according to claim 22 or 23, wherein the method comprising assessing the ability of the agent to bind to an EphB4 polypeptide within the region of residues 220 to 244 of EphB4 (SEQ ID NO:1).

25. A method according to any one of claims 22 to 24, wherein the method
5 comprising assessing the ability of the agent to bind to an EphB4 polypeptide within the region of residues 220 to 230 of EphB4 (SEQ ID NO: 1).

26. A method of identifying an agent which inhibits cancerous growth of a cell, the method comprising assessing the ability of the agent to bind to a polypeptide comprising a sequence at least 85% identical to residues selected from the group
10 consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1) and residues 220 to 230 of EphB4 (SEQ ID NO: 1).

27. A method according to claim 26, the method comprising assessing the ability of the agent to bind to a polypeptide comprising a sequence at least 90% identical to residues selected from the group consisting of residues 200 to 400 of EphB4 (SEQ ID NO: 1), residues 201 to 245 of EphB4 (SEQ ID NO: 1), residues 220 to 244 of EphB4 (SEQ ID
15 NO: 1) and residues 220 to 230 of EphB4 (SEQ ID NO: 1).

28. A method according to any one of claims 22 to 27, wherein the sequence has a substitution of amino acid Asp (D) to Asn (N) at residue 226 of EphB4 (SEQ ID NO: 1).

29. An agent which inhibits cancerous growth of a cell when identified by the
20 method according to any one of claims 22 to 28.

30. A purified EphB4 antibody which binds to a polypeptide having a sequence at least 85% identical to residues 201 to 245 of EphB4 (SEQ ID NO: 1).

31. A purified EphB4 antibody according to claim 30, wherein the polypeptide has a sequence at least 90% identical to residues 201 to 245 of EphB4 (SEQ ID NO: 1).

25 32. A purified EphB4 antibody which binds to a polypeptide having a sequence at least 85% identical to residues 220 to 244 of EphB4 (SEQ ID NO: 1).

33. A purified EphB4 antibody according to claim 32, wherein the polypeptide has a sequence at least 90% identical to residues 220 to 244 of EphB4 (SEQ ID NO: 1).

34. A purified EphB4 antibody which binds to a polypeptide having a sequence at least 85% identical to residues 220 to 230 of EphB4 (SEQ ID NO: 1).
35. A purified EphB4 antibody according to claim 34, wherein the polypeptide has a sequence at least 90% identical to residues 220 to 230 of EphB4 (SEQ ID NO: 1).
- 5 36. A purified EphB4 antibody according to any one of claims 30 to 35, wherein the antibody binds to an epitope located in residues 200 to 400 of EphB4 (SEQ ID NO: 1).
37. A purified EphB4 antibody according to any one of claims 30 to 36, wherein the antibody binds to a polypeptide having a substitution of amino acid Asp (D) to Asn (N) at residue 226 of EphB4 (SEQ ID NO: 1).
- 10 38. A purified EphB4 antibody according to any one of claims 30 to 37, wherein the antibody is a monoclonal antibody.